

**Notice of Allowability**

Application No.

10/601,813

Examiner

Daniel A. Hess

Applicant(s)

RAMACHANDRAN ET AL.

Art Unit

2876

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Interview with Applicant's representative Mr. Daniel Wasil on 12/21/2006.
2. ☒ The allowed claim(s) is/are 1-34.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date 11/21/2006.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

**EXAMINER'S AMENDMENT / ALLOWANCE**

This action is responsive to an Appeals conference conducted with the Applicant's representative Mr. Daniel Wasil on 12/21/2006, a summary of which is included herewith.

**EXAMINER'S AMENDMENT**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Daniel Wasil on 12/21/2006.

The application has been amended as follows:

IN THE CLAIMS:

1. (currently amended) An automated banking machine apparatus comprising:

a housing;

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a user interface in supporting connection with the housing, the user interface including at least one input device and at least one output device, wherein the at least one input device includes a card reader having an associated card reader slot adapted to accept cards input by users of the apparatus;

at least one radiation emitting device positioned adjacent the slot, wherein the at least one radiation device is operative to emit radiation;

at least one radiation sensing device adjacent the slot, wherein both with and without an unauthorized card reading device positioned adjacent the slot the at least one radiation sensing device is operative to sense radiation emitted from the at least one radiation emitting device such that positioning an unauthorized card reading device adjacent the slot causes a sensed change in at least one property of radiation from the at least one radiation emitting device ~~that is sensed by the at least one radiation sensing device;~~

at least one controller in the housing, wherein the at least one controller is in operative connection with the at least one radiation sensing device and is operative to generate at least one signal responsive to the change, whereby installation of an unauthorized card reading device adjacent the slot is indicated.

19. (currently amended) An automated banking machine apparatus comprising:

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a user interface,

a slot member on the user interface and bounding at least one side of a slot,

at least one sensor device positioned to detect an unauthorized object placed adjacent the user interface,

wherein the at least one sensor device includes at least one radiation emitting device and at least one radiation sensing device mounted in supporting connection with the slot member,

wherein both with and without an unauthorized object placed adjacent the user interface, the at least one radiation sensing device is operative to sense radiation emitted from the at least one radiation emitting device,

at least one controller,

wherein the at least one controller is operative to selectively control the at least one sensor device.

26. (currently amended) A method comprising:

(a) sensing with at least one sensing device adjacent to a card reader slot of a user interface of an automated banking machine, an unauthorized card reader device attached to the user interface,

wherein the sensing includes emitting radiation with at least one emitting device located adjacent the slot;

wherein the sensing includes sensing radiation from the at least one emitting device with at least one radiation sensor device located adjacent the slot and the at least one emitting device;

wherein both with and without an unauthorized card reader device attached to the user interface, the at least one radiation sensing device is operative to sense radiation emitted from the at least one radiation emitting device,

wherein the sensing device is selectively controlled by at least one controller of the machine;

(b) responsive to sensing the unauthorized card reader device, providing at least one output from the machine.

35. Cancelled.

36. Cancelled.

37. Cancelled.

38. Cancelled.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-15, 19, 24-31 and 33-34 have been considered, and while they were largely not convincing, they are moot in light of the above Examiner's amendments.

Applicant's arguments with respect to claim 16 (pages 21 and 22 of the 10/25/2006 correspondence by the Applicant) were convincing, as is detailed below. Claims 17, 18 and 20-22 depend on claim 16.

Applicant's arguments with respect to claims 23 and 32 stemmed from a differing perspective by the Applicant and the Examiner on the meaning of the term 'fuzzy logic.' A definition from the Microsoft™ Computer Dictionary was agreed upon, as is detailed below.

Applicant's arguments with respect to claims 35, 36 and 37 are moot because these claims have been cancelled with the authorization of the Applicant by Examiner's amendment.

***Allowable Subject Matter***

Claims 1-34 are allowed.

The following is an examiner's statement of reasons for allowance:

Regarding independent claims 1, 19, 26, which are presently amended by Examiner's amendment, and upon which claims 2-15, 24, 25, 27-31 and 33-34 depend Mair et al. (US 6,367,695) and others fail to teach that the radiation sensing device detects unauthorized objects placed adjacent to the card slot, wherein the sensing device senses radiation from at least one radiation emitting device both with and without an unauthorized object positioned in from of the card reader.

In other words, the Instant Invention departs from the prior art of record in that the Inventive sensing system detects degrees of obstruction, and not merely the presence or absence of a signal from the emitter.

This aspect particular to the Instant Invention can be seen notably in Instant figure 14. In contrast to Mair (see figure 3), where a single emitter 108 is opposite a single detector 102 resulting in either detection or blockage, in the Instant Invention there are (see figure 14) a bank

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of multiple emitters 126 and detectors 128. Mair on the other hand teaches (column 3, lines 15-20; column 3, lines 55-60 and column 5, lines 38-45) that sensing an object in the vicinity of the card reader is based in essence on total beam blockage. Therefore, Mair et al. is structurally incapable of both detecting an unauthorized object adjacent the card slot and at the same time detecting radiation from the emitter (since detecting an unauthorized object is tantamount in Mair et al. to not detecting radiation from the emitter). In the Instant Invention by contrast, there are multiple detectors 128 and therefore if the path between an emitter 126 and one detector 128 is blocked, this could signal the possibility of a fraudulent object in place. Meanwhile, another detector 128 may still detect radiation because it is in a different location from the first detector (see figure 14).

Regarding claim 16, upon which claims 17, 18 and 20-22 depend, the prior art of record fails to teach or fairly suggest, in the context of the other limitations, an arrangement wherein

“the controller is operative to cause prompting of a user to move a card in the slot, wherein the at least one controller is operative to selectively cause operation of the at least one radiation emitting device, wherein the operation is dependent on the prompting”

As the Applicant has pointed out, prompting a user to move a card is not explicitly recited in Mair et al. While it might be argued that it could be obvious to prompt the user to clear the card path, making the operation of the radiation emitting device dependent on the prompting cannot be considered obvious, without a teaching for such.



Regarding claims 23 and 32, the issue over which allowability hinges is the use of ‘fuzzy logic’ in the framework of the present system. The Examiner had previously stated (page 9 of 5/3/06 action), with regard to Mair et al., “One feature (column 5, lines 45-55) is that under certain circumstances of normal use, interruption of the signals will not lead to an alarm. This is a form of fuzzy logic.”

The allowability of these claims depends on application of a specific definition of fuzzy logic such as that of the Microsoft Computer Dictionary. The use of the definition supplied by the Microsoft Computer Dictionary was suggested by Applicant’s representative Daniel Wasil in an interview on 12/21/2006.

The following definition is agreed upon based on the Applicant’s comments:

***fuzzy logic*** n. A form of logic used in some expert systems and other artificial-intelligence applications in which variables can have degrees of truthfulness or falsehood represented by a range of values between 1 (true) and 0 (false). With fuzzy logic, the outcome of an operation can be expressed as a probability rather than as a certainty.

Microsoft® Computer Dictionary, Fifth Edition by Microsoft Corporation  
Publisher: Microsoft Press, Pub Date: May 01, 2002

By this definition, Mair et al. clearly does not meet the definition of fuzzy logic. The passage cited by the Examiner as being a form of fuzzy logic (column 5, lines 45-55) states “To accommodate normal usage of the ATM 100, the comparator 112 incorporates a time delay which prevents the issue of an alarm signal until the detector 108 has not received signals from the emitter 102 for a predetermined time interval.” While this is robust logic that compensates for real life conditions, the above definition is not met. Elsewhere, the prior art fails to teach or fairly suggest the use of fuzzy logic in the present context.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

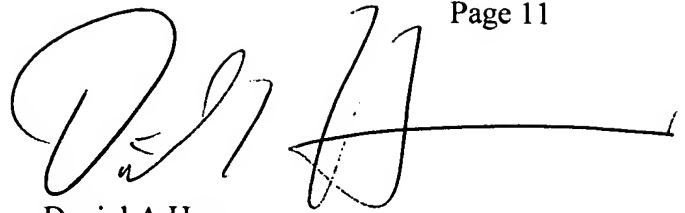
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel A. Hess whose telephone number is (571) 272-2392. The examiner can normally be reached on 8:00 AM - 5:00 PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on (571) 272-2398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

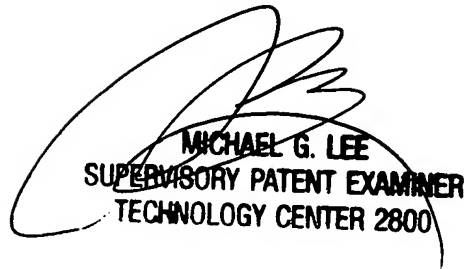
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Daniel A Hess  
Examiner  
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12/26/2006

A handwritten signature in black ink, appearing to read 'Michael G. Lee', with a large loop on the left side.

MICHAEL G. LEE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800